News release

Another warm year

17 December 2002

2002: ONE OF THE WARMEST YEARS ON RECORD IN BRITAIN
Second Warmest year globally

The year 2002 has been one of the warmest years in Britain since records began in 1659, according to figures released by the Met Office today. This is mainly due to January to April 2002 being extremely mild with maximum temperatures in February being the second warmest on record. Although temperatures in the rest of the year were generally nearer to average, the year as a whole is likely to be the 4th warmest in the record. The mean Central England temperature so far this year is 10.5 °C; only 1949, 1990 and 1999 were warmer when the CET was 10.6 °C. These comparisons are made with the Central England Temperature Series which covers the past 344 years.

Although February, October and November were notably wet months over England and Wales they were not record-breaking. However, eastern Scotland had its second wettest October on record. Floods occurred over north-eastern England after 61mm of rain fell there on 1st August, the highest daily total for August in that region on record.

Met Office climate scientist David Parker, said: "2002 has been another very warm year in Central England and five of the six warmest years since 1659 have occurred since 1990. However this year is unlikely to be the warmest ever because temperatures would have to be more than 2 degrees higher than normal for the remainder of the year. We'll be keeping a close eye on 2003 to see whether it breaks records."

In December 2001, the Met Office's Hadley Centre for Climate Prediction and Research correctly predicted that the global surface temperature for 2002 would be the second highest on record. The predicted anomaly, 0.47 °C, was very close to the 0.49 °C observed. The prediction for 2003 is for 0.55 °C above the 1961-1990 average, with a 95% confidence range of 0.41 °C to 0.69 °C. This prediction is for the same temperature as that observed in the warmest year, 1998, thus there is a 50% probability that 2003 will be as warm or warmer than the previous warmest year, 1998, but only a 20% probability that 2003 will be cooler than 2002.

According to figures compiled by the Met Office and the University of East Anglia for the World Meteorological Organization (W.M.O.), 2002 has been the second warmest year worldwide since records began in 1860, with the global mean surface temperature estimated to be 0.49 °C above the long-term average. Nine of the 10 warmest years have occurred since 1990, including 1999, 2000 and 2001; only 1998 was warmer than 2002. Average global temperatures have risen by more than 0.6 °C over the past 100 years and it is thought likely that the warming over the past 50 years mainly due to human activities, e.g. burning of fossil fuels. If temperatures over the oceans are excluded, the temperature in 2002 has equalled that of 1998, the warmest year on record, when the average land air temperature was 0.88 °C above the average for 1961-90.

World maps of temperatures for 2002 show above-average values in most regions, especially Eurasia. However, some locations experienced lower than normal temperatures: these included parts of Canada, part of the eastern north Pacific, western Argentina, Bolivia, southern Peru and the north-western and southern coasts of Australia. After experiencing a warmer than usual winter, Canada experienced a very cold spring.

Phil Jones of the Climatic Research Unit, University of East Anglia, said: "Globally, warm years generally occur during the latter stages of El Niño events in the eastern equatorial Pacific Ocean. The warmth of 2002 is remarkable considering how small this effect was during much of the year compared to the influence of the large 1997/8 El Niño event in the record breaking year of 1998. Given that a moderate El Niño event is taking place, there is a good chance that 2003 will be warmer than 2002."

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Notes:

1. Graphs representing global, northern hemisphere and southern hemisphere temperatures are available.

2. These global statistics are compiled using data from land and sea, which have been analysed by the Met Office and the University of East Anglia. All figures contained in the news release are provisional. However, the global temperature ranking relative to other years is unlikely to change.

3. The accuracy of the experimental forecast for 2003 may depend on the evolution of the current El Niño event in the eastern tropical Pacific.

4. The period over which averages have been calculated is 1961-90.

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